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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DIEP, NHON THANH	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/808,326	HOBSON ET AL.	
	Examiner	Art Unit	
	Nhon T Diep	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *18-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 24-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/03-14-2001*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-17 and 24-40 are rejected under the judicially created doctrine of double patenting over claims 1-16 of U. S. Patent No. 6,317,152 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming

common subject matter, as follows: Claims 1-16 of U. S. Patent No. 6,317,152 encompass claims 1-17 and 24-40 of the present application.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 34-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Wootton et al (US 5,956,424).

Wootton et al discloses a low false alarm rate detection for a video image processing based security alarm system comprising the same digital video recording system comprises a camera directed at a scene of interest to view the scene and to continuously generate a plurality of video images thereof (fig. 1, el. C1); an image processor configured to compare the video images generated by the camera with previously establish reference image of the scene to identify the occurrence of a change in the scene (col. 6, ln. 55-61); a memory associated with the image processor, the memory configured to store video image data; and wherein the image processor is further configured to select and store the previously established reference video image

in the memory (col. 4, ln. 4, ln. 50-52), and wherein the image processor is further configured to store, in the memory, video image data representative of identified changes in the scene (fig. 8 and col. 5, ln. 35-38, 62-65) as specified in claim 34; each of the video image is composed of a plurality of pixels, and wherein the video image data representative of identified changes in the scene includes at least on changed block of pixels from a video image together with a reference image associated block map (col. 3, ln. 17-37 and col. 7, ln. 20-65) as specified in claim 35.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 36-37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wootton et al.

As applied to claims 34-35 above, It is noted that Wootton et al does not particularly disclose the reference image block map consists of at least one binary representation of a corresponding pixel block comprising a video image, a first binary representation indicating an unchanged block, and a second binary representation indicating a changed pixel block and the corresponding pixel block in the reference image associated block map indicates the position of the block in the video image as specified in claims 36-37; and the image processor is configured to reconstruct a video image of a changed scene by extracting the previously established reference video

image together with the video image data representative of the identified changes in the scene from the memory as specified in claim 40.

With regard to claims 36-37: Wootton discloses that the method to mask those areas wherein movements within those areas will be disregarded and not sensed as an anomaly requiring processing to determine if a human intruder is present and that in digital image processing a "0" and "1" or binary representation are of the simplest form to indicate different between two states. Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Wootton et al by using some identifying method to differentiate between areas where movements will be disregarded and not sensed with other areas where movements will be further processed by using binary representation for a corresponding pixel block. Doing so would help to easily identify blocks of interests.

With regard to claim 40: Wootton also discloses if the motion of an intruder overlap a masked area, the difference from one image to another is identified and further processing, including the normal masked area takes place (col. 5, ln. 35-38). Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made, while processing the difference from one image to another including the normal masked area (areas will be disregarded and not sensed = reference image), to reconstruct the video image of a changed scene by combining both of a masked area and processing the difference from one image to another. Doing so would help to restore important video frames with show possible intruders for later judicial process.

7. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wootton et al, in view of Adiletta et al (all are cited by the applicants).

As applied to claim 34 above, it is noted that the combination of Wootton et al, does not particularly disclose video image data representative of identified changes is compressed prior to storage. Adiletta et al teaches identified changes between successive frames are calculated and compressed to save bandwidth (col. 11, ln. 30-44). Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Wootton et al, by applying the teaching of Adiletta et al to perform the image analysis. Doing so would help to detect changes between successive images and save storage.

8. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wootton et al, in view of Dozier et al (US 5, 751,346).

As applied to claim 34 above, it is noted that Wootton et al does not particularly disclose the video image representative of identified changes includes transaction identification information as specified in claim 39. Dozier et al teaches that it is highly desirable in a banking operation to have an image saved which shows the person who made a customer transaction so that at a later time there can be a verification of whether this transaction occurred and an image to verify the identity of the person who made the transaction. And since Wootton et al does want to identify and further process the difference from one image to another. Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made, having both of these references for reviewing, would be motivated to modify the system of

Wootton et al by recording and saving with an identified changed portions, information indicating a customer transaction so that at a later time there can be a verification of whether this transaction occurred and an image to verify the identity of the person who made the transaction.

9. Claims 1-3, 24-25, 28 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winter et al, in view of Logan et al (both are cited by the applicants).

Winter et al discloses an efficient pre-alarm buffer management comprising the same digital video recording system comprising: a camera directed at a scene of interest to view the scene (inherently included) and to continuously generate a plurality of video images thereof; an image processor configured to compare the video images generated by said camera with a previously established reference image of said scene to determine if any changes have occurred therein; a memory associated with said image processor, said memory configured to store a plurality of video images; and wherein said image processor is further configured to access said memory to retrieve said video images produced by said camera, said image processor accessing said memory at any desired memory location representing a time of interest so as not to have to sequentially scan a plurality of video images to locate a video image of interest, and said image processor configured to access said memory without interrupting said processing of currently acquired video images (and col. 3, ln. 55-57) as specified in claim 1, 24-25, 28 and 34; wherein said camera is an analog video camera (col. 5, ln. 3-6) as specified in claim 2; further including a frame grabber configured to receive said video images from said camera and to generate a digital signal representation of said

video images (col. 5, ln. 3-6) as specified in claim 3; the image processor is configured to store any identified regions of change in said memory (col. 4, ln. 13-67) as specified in claim 27. It is noted that Winter et al does not particularly disclose the image processor configured to access said memory without interrupting said processing of currently acquired video images as specified in claim 1, 24-25, 28 and 34. Logan et al, in the time delayed video system using concurrent recording and playback, teaches that as incoming video signals are processed, the memory stores the incoming data and also continuously read from the memory and supplied to a video display (Fig. 1, and col. 3, ln. 8-24). Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Winter et al by incorporating the feature of, as incoming video signals are processed, storing in the memory the incoming data and also continuously read from the memory and supplied to a video display as taught by Logan et al. Doing so would help to review stored video images without losing or interrupting the flow of surveillance video images.

10. Claims 4, 11-17 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winter et al, in view of Logan, and further in view of Seeley et al (all are cited by the applicants).

As applied to claim 1 above, it is noted Winter et al further includes said image processor is further configured to store a time and date stamp with said video images (col. 6, ln. 2-7) as specified in claim 13. However, it is noted that the combination of Winter et al and Logan does not particularly disclose that the camera is a digital video camera; image processor is configured to update the previously established reference

image of the scene against which the digital signals are compared; image processor is configured to store the video images in the memory subsequent to a determination of a change from the reference image; image processor is further configured to store authentication data with the video images; image processor is configured to retrieve said video images at a second frame rate different from a first frame rate at which the video images were captured by the camera; image processor is remote from the memory and the system includes a transmission means for communicating video images between the memory and the image processor; and including an event identifier, the event identifier providing event identification data to the image processor, the image processor configured to associated the event identification data with the video images generated by the camera; including accessing said memory from a location remote therefrom; including a plurality of cameras each of which is directed at a respective scene of interest, and the method further includes each camera continuously viewing each respective scene and generating video images thereof at a predetermined frame rate, converting each frame of video image from each camera to a signal, processing each digital signal and storing the processed video images in the memory as specified in claims 4, 11-12, 14-17 and 29-33.

Seeley et al teaches that digital camera can also be used in the surveillance system (col. 10, ln. 60-62) as specified in claim 4 and the advanced video security system of Seeley further comprises an image processor which is configured to update the previously established reference image of the scene against which the digital signals are compared (col. 13, ln. 41-44) as specified in claims 11 and 33; the image

processor is configured to store the video images in the memory subsequent to a determination of a change from the reference image (col. 14, ln. 47-50) as specified in claim 12; the image processor is further configured to store authentication data with the video images (col. 15, ln. 46-50) as specified in claims 14 and 31; the image processor is configured to retrieve the video images at a second frame rate different from a first frame rate at which the video images were captured by the camera (col. 14, ln. 54-60) as specified in claims 15 and 29; the image processor is remote from the memory and the system includes a transmission means for communicating video images between the memory and the image processor (col. 9, ln. 67 – col. 19, ln. 12) as specified in claim 16; including an event identifier, the event identifier providing event identification data to the image processor, the image processor configured to associated the event identification data with the video images generated by the camera (col. 15, ln. 61-65) as specified in claim 17; including accessing said memory from a location remote therefrom (col. 9, ln. 41-45) as specified in claim 30; including a plurality of cameras each of which is directed at a respective scene of interest, and the method further includes each camera continuously viewing each respective scene and generating video images thereof at a predetermined frame rate, converting each frame of video image from each camera to a signal, processing each digital signal and storing the processed video images in the memory (col. 14, ln. 40-53) as specified in claim 32 and therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Winter et al, in view of Logan by incorporating all of the above features as taught by Seeley et al. Doing so would help to

eliminate the need of converting analog signal to digital signal, and further more, to build a more advanced security system that law enforced personnel can effectively use to stop and to successfully prosecute intruders.

11. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winter et al, in view of Logan, and Seeley et al (all are cited by the applicants), and further in view of Hazra (US 6,414,994).

As applied to claim 1 above, Even though Seeley et al teaches the detection process which compares pixel by pixel for the entire image frame (col. 4, ln. 10-19), it is noted that Seeley et al it is noted that does not particularly disclose the dividing of an image frame to a plurality of blocks of pixels and perform the block matching process based on those blocks and identifying those blocks. Hazra teaches to move a prediction block of a reference frame in a predetermined searching range to identify the block in the predetermined searching range that best matches a base block of the current frame (col. 4, ln. 46-50). Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Winter et al, in view of Logan et al and Seeley et al by using a block matching technique as taught by Hazra. Doing so would help to reduce the need of searching the entire frame pixel by pixel which is very time consuming task.

12. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winter et al, in view of Logan et al, and further in view of Burt et al (US 5, 999, 662).

As applied to claim 124above, it is noted that the combination of Winter et al, and Logan et al does not particularly disclose the video image is configured to generate a

combined video image from the plurality of video images generated by the cameras and to compare the combined video image with a combined video image with a combined reference image composed of a plurality of reference images of the at least one scene as specified in claim 26. Hazra teaches "mosaic is a data structure that melds visual information from a set of images taken at a plurality of time instants, viewpoints, or fields of view. The various images are aligned and combined to form, for example, a panoramic view of a scene as a single still image. Importantly, a mosaic is not limited to a combination of distinct images, but may also be a combination of mosaics. The invention is a system that automatically forms a mosaic from a plurality of images for utilization by various application systems and that the surveillance system uses a mosaic for detection of motion, for example, for security purposes or for motion detection on a scene." (col.). Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Winter et al, and Logan et al by combining visual information from a set of images taken at a plurality of time instants, viewpoints, or fields of view as taught by Burt et al. Doing so would to widen surveillance field of views.

13. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winter et al, in view of Logan et al, and further in view of Adiletta et al (all are cited by the applicants).

As applied to claim 34 above, it is noted that the combination of Winter et al, and Logan et al, does not particularly disclose video image data representative of identified changes (the examiner considers motion vector information as data representative of

identified changes) is compressed prior to storage. Adiletta et al teaches that in the process of performing motion estimation, motion vector which representing changes between successive frames are calculated and compressed to save bandwidth (col. 11, ln. 30-44). Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Winter et al, and Logan et al, by applying the teaching of Adiletta et al to perform the image analysis. Doing so would help to detect changes between successive images and save storage.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Choi (US 5,986,695) discloses a recording method and apparatus for conserving space on recording medium of security system.

b. Koller et al (US 6,130,707) discloses a video motion detector with global insensitivity.

c. Randall (US 6,727,938) discloses a security system with maskable motion detection and camera with an adjustable field of view.

d. Noll et al (US 3,816,648) discloses a scene intrusion alarm.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon T Diep whose telephone number is 703-305-4648. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S Kelley can be reached on 703 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-2600.

NHON DIEP
PRIMARY EXAMINER

ND

24 June 2004